

COMMON GEOMETRIC PRACTICES RURAL COLLECTOR ROADS

		TRAFFIC VOLUME								
	TERRIAN	UNDER 400 A.D.T.			400-2000 A.D.T.				OVER 2000 A.D.T.	
MINIMUM DESIGN SPEED (M.P.H.) ⑦	LEVEL	40			50				60	
	ROLLING	30			40				50	
	MOUNTAIN	20			30				40	
PAVEMENT WIDTH (FEET) ① ⑧	DESIGN SPEED	UNDER 400 A.D.T.			400-1500 A.D.T.		1500-2000 A.D.T.		OVER 2000 A.D.T.	
	20 MPH	20 ⑨			20		22		24	
	25 MPH									
	30 MPH									
	35 MPH									
	40 MPH	20			22		24			
	45 MPH									
	50 MPH	22								
	55 MPH									
60 MPH										
MINIMUM GRADED SHOULDER WIDTH (FEET) ⑥	ALL SPEEDS	2			5 ⑩		6		8	
MIN. CLEAR ROADWAY WIDTH OF NEW AND RECONSTRUCTED BRIDGES	ALL SPEEDS	APPROACH ROADWAY WIDTH								
	DESIGN SPEED	eMAX. 4%			eMAX. 6%			eMAX. 8%		
MINIMUM RADIUS (FEET)	20 MPH	125			115			105		
	25 MPH	205			185			170		
	30 MPH	300			275			250		
	35 MPH	420			380			350		
	40 MPH	565			510			465		
	45 MPH	730			660			600		
	50 MPH	930			835			760		
	55 MPH	1190			1065			965		
	60 MPH	1505			1340			1205		
NORMAL PAVEMENT CROSS SLOPES ④	RATE OF CROSS SLOPE = 2%									
NORMAL SHOULDER CROSS SLOPES	EARTH = 8% PAVED = 4%									
MAXIMUM GRADE (PERCENT) ⑤	M.P.H.	20	25	30	35	40	45	50	55	60
	LEVEL	7						6		5
	ROLLING	10		9		8		7		6
	MOUNTAIN	12	11	10			9		8	
MINIMUM STOPPING SIGHT DISTANCE ②	(FEET)	115	155	200	250	305	360	425	495	570
MINIMUM PASSING SIGHT DISTANCE ③	(FEET)	710	900	1090	1280	1470	1625	1835	1985	2135

- ① WIDEN PAVEMENT ON CURVES IN ACCORDANCE WITH APPROVED DESIGN STANDARDS. REFER TO CURRENT STANDARD DRAWING FOR ADDITIONAL DETAIL.
- ② MINIMUM STOPPING SIGHT DISTANCE BASED ON HEIGHT OF EYE OF 3.5 FT AND HEIGHT OF OBJECT OF 2.0 FT. CONSIDER BOTH HORIZONTAL AND VERTICAL ALIGNMENTS.
- ③ MINIMUM PASSING SIGHT DISTANCES BASED ON HEIGHT OF EYE 3.5 FT AND HEIGHT OF OBJECT OF 3.5 FT. CONSIDER BOTH HORIZONTAL AND VERTICAL ALIGNMENTS.
- ④ NORMAL PAVEMENT CROSS SLOPES ON BRIDGES IS 2%.
- ⑤ MAY USE ONE PERCENT STEEPER MAXIMUM GRADES ON SHORT LENGTHS (LESS THAN 500 FT) AND ON ONE-WAY DOWN GRADES.
- ⑥ WIDEN 3 FT FOR GUARDRAIL.
- ⑦ DOCUMENT AND RETAIN JUSTIFICATION FOR A DESIGN SPEED LESS THAN THE REGULATORY OR POSTED SPEED IN THE PROJECT FILES.
- ⑧ ON ROADWAYS TO BE RECONSTRUCTED, A 22 FT TRAVELLED WAY MAY BE RETAINED WHERE THE SAFETY RECORDS AND ALIGNMENT ARE SATISFACTORY.
- ⑨ 18 FT MINIMUM WIDTH MAY BE USED FOR ROADWAYS WITH DESIGN VOLUMES UNDER 250 A.D.T.
- ⑩ SHOULDER WIDTH MAY BE REDUCED FOR DESIGN SPEEDS GREATER THAN 30 MPH PROVIDED A MINIMUM ROADWAY WIDTH OF 30 FT IS MAINTAINED.